



Illuminating
ENGINEERING SOCIETY

ANSI/IES RP-8-14

Roadway Lighting



CURRENT Ex.1034

- (a) LRL lines of 1.0 MH, 1.75 MH, and 2.75 MH
- (b) TRL lines of 1.0 MH, 2.25 MH, 3.75 MH, 6.0 MH, and 8.0 MH
- (c) Maximum candlepower location and half maximum candlepower trace
- (d) Candlepower lines equal to the numerical values of 2 percent, 5, 10 and 2 percent of the rated bare lamp lumens.

E2. Lateral light distributions

Lateral light distributions are divided into three groups: short (S), medium (M), and long (L). See **Figures E1** and **E4**.

E2.1 Short distribution A luminaire is classified as having a short light distribution when its maximum candlepower point lies in the "S" zone of the grid which is from the 1.0-MH TRL to less than the 2.25-MH TRL.

E2.2 Medium distribution A luminaire is classified as having a medium light distribution when its maximum candlepower point lies in the "M" zone of the grid which is from the 2.25-MH TRL to less than the 3.75-MH TRL.

E2.3 Long distribution A luminaire is classified as having a long light distribution when its maximum candlepower point lies in the "L" zone of the web which is from the 3.75-MH TRL to less than the 6.0-MHTRL.

E3. Transverse light distributions

Transverse light distributions (see **Figures E3** and **E4**) are divided into two groups based on the location of the luminaire as related to the area to be lighted. Each group may be subdivided into divisions with regard to the width of the area to be lighted in terms of the MH ratio. Only the segments of the half maximum candlepower isocandela trace that fall within the longitudinal distribution range, as determined by the point of maximum candlepower (short, medium, or long), are used for the purpose of establishing the luminaire distribution width classification.

E3.1 Luminaires at or near center of area The group of lateral width classifications that deals with luminaires intended to be mounted at or near the center of the area to be lighted has similar light distributions on both the "house side" and the "street side" of the reference line.

E3.1.1 Type I A distribution is classified as Type I when its half maximum candlepower isocandela trace lies within the Type I width range on both sides of the reference line which is bounded by 1.0-MH house side. LRL and 1.0-MH street side LRL within the longitudinal distribution range (short, medium, or long) where the point of maximum candlepower falls.

E3.1.2 Type I, four-way A distribution is classified as Type I, Four-Way when it has four beams of the width as defined for Type I above.

E3.1.3 Type V A distribution is classified as Type V when the distribution has a circular symmetry of candlepower distribution which is essentially the same at all lateral angles around the luminaire.

E3.2 Luminaires near side of area The group of lateral width classifications that deals with luminaires intended to be mounted near the side of the area to be lighted vary as to the width of distribution range on the street side of the reference line. The house side segment of the half maximum candlepower isocandela trace within the longitudinal range in which the point of maximum candlepower falls (short, medium, or long) may or may not cross the reference line. In general, it is preferable that the half maximum candlepower isocandela trace remains near the reference line. The variable width on the street side is as defined.

E3.2.1 Type II A distribution is classified as Type II when the street side segment of the half maximum candlepower isocandela trace within the longitudinal range in which the point of *maximum candlepower falls* (short, medium, or long) *does not cross the 1.75-MH street side LRL*.

E3.2.2 Type II, four-way A distribution is classified as a Type II, Four-Way when it has four beams each of the width on the street side as defined for Type II above.

E3.2.3 Type III A distribution is classified as Type III when the street side segment of the half maximum candlepower isocandela trace within the longitudinal range in which the point of maximum candlepower falls (short, medium, or long) lies partly or entirely beyond the 1.75-MH street side LRL, but does not cross the 2.75-MH street side LRL.

E3.2.4 Type IV A distribution is classified as Type IV when the street side segment of the half maximum candlepower isocandela trace within the longitudinal range in which the point of maximum candlepower falls (short, medium, or long) lies partly or entirely beyond the 2.75-MH street side LRL.

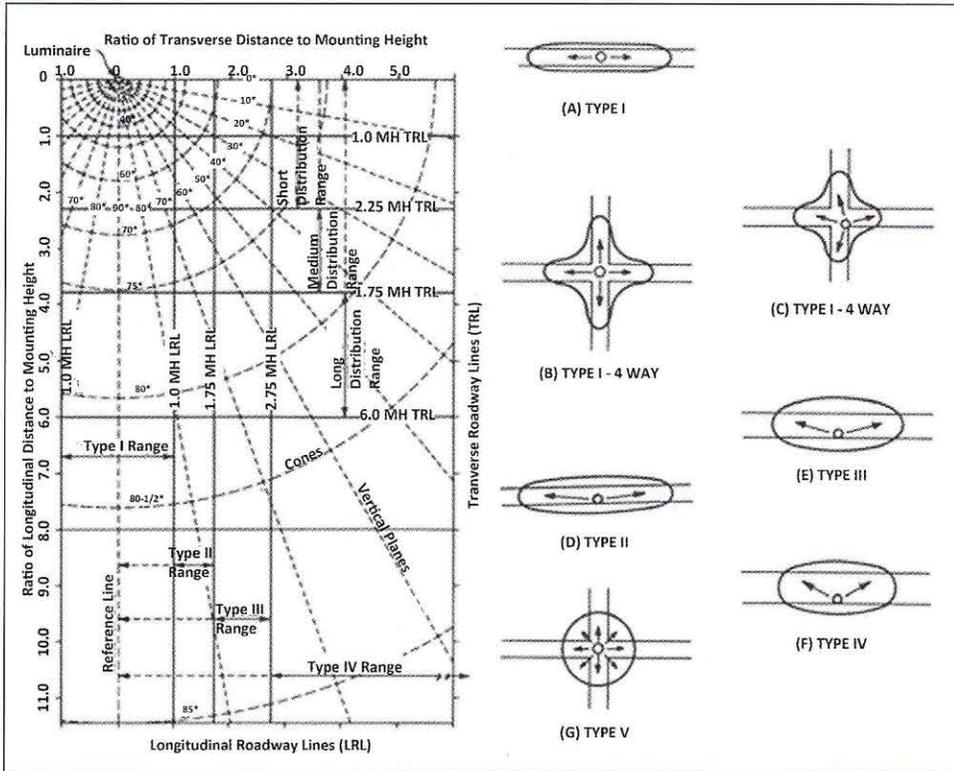


Figure E4. Plan view of roadway coverage for different types of luminaires.

Figure E5. Diagram showing projection of maximum candlepower and half maximum candlepower isocandela trace from a luminaire having a Type III – Medium distribution, on the imaginary sphere and the roadway. Sinusoidal web and rectangular web representation of sphere are also shown, with maximum candlepower and half maximum candlepower isocandela trace.

